

Notice of Allowability

Application No.

09/941,936

Examiner

Kathleen M. Kerr

Applicant(s)

BATHE ET AL.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/13/05.
2. ☒ The allowed claim(s) is/are 14,16-18,25-29,33 and 35-39.
3. ☒ The drawings filed on 30 August 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

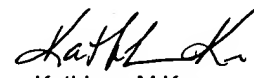
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Kathleen M Kerr
Primary Examiner
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DETAILED ACTION

Application Status

1. In response to the previous Office action, a non-final rejection (mailed on January 13, 2005), Applicants filed a response and amendment received on April 13, 2005. Said amendment cancelled Claim 21 and amended Claim 14, 18, 25, 26, 28, 37, and 38. Thus, Claims 14, 16-18, 25-29, 33, and 35-38 are pending in the instant Office action and will be examined herein.

Priority

2. As previously noted, the instant application is granted the benefit of priority for the foreign application 10043332.4 filed in Germany on September 2, 2000 and application 10033426.5 filed in Germany on July 10, 2001. Translations of said documents have been received on December 23, 2003.

Withdrawn - Claim Objections

3. Previous objection to Claim 21 under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim is withdrawn by virtue of Applicant's cancellation of said claim.

4. Previous objection to Claim 28 for having improper grammar is withdrawn by virtue of Applicant's amendment.

Withdrawn - Claim Rejections - 35 U.S.C. § 112

5. Previous rejection of Claims 25 and 37 under 35 U.S.C. § 112, second paragraph, as being indefinite for “a Zwa1 protein” is withdrawn by virtue of the Examiner’s amendment below.

6. Previous rejection of Claims 14, 16-18, 21, 25-28, 33, and 35-38 under 35 U.S.C. § 112, second paragraph, as being indefinite for the phrase “fermenting coryneform bacteria which produce a desired L-amino acid comprising an overexpressed polynucleotide” is withdrawn by virtue of Applicant’s amendment.

7. Previous rejection of Claims 14, 16-18, 21, 25-28, 33, and 35-38 under 35 U.S.C. § 112, second paragraph, as being indefinite for the phrase “an overexpressed polynucleotide sigC” is withdrawn by virtue of Applicant’s amendment.

8. Previous rejection of Claims 14, 16-18, 21, 25-28, 33, and 35-38 under 35 U.S.C. § 112, second paragraph, as being indefinite for the phrases “a nucleotide sequence of SEQ ID NO:1” and “an amino acid sequence of SEQ ID NO:2” (emphasis added) is withdrawn by virtue of Applicant’s amendment.

9. Previous rejection of Claims 25 and 37 under 35 U.S.C. § 112, second paragraph, as being indefinite for the phrases “a gene **hom** coding for homoserine dehydrogenase” and “a gene **ilvA** coding for threonine dehydratase” (emphasis added) is withdrawn by virtue of the Examiner’s amendment below.

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10. Previous rejection of Claims 25 and 37 under 35 U.S.C. § 112, second paragraph, as being indefinite for the phrase “**a gene** coding for acetohydroxy acid synthase” (emphasis added) is withdrawn by virtue of the Examiner’s amendment below.

11. Previous rejection of Claims 26 and 38 under 35 U.S.C. § 112, second paragraph, as being indefinite for how bacteria can “comprise” that which has been “eliminated” is withdrawn by virtue of Applicant’s amendment.

12. Previous rejection of Claims 28-29 under 35 U.S.C. § 112, first paragraph, enabling deposit, is withdrawn by virtue of Applicant’s clear statement of availability for the record.

13. Previous rejection of Claims 25 and 37 under 35 U.S.C. § 112, first paragraph, scope of enablement, because the specification, while being enabling for overexpressing the additional genes by transforming a host cell with a vector comprising said genes and a promoter, does not reasonably provide enablement for overexpressing said additional genes by means otherwise mentioned in the specification is withdrawn by virtue of Applicant’s amendment defining the means for overexpression in said claims.

EXAMINER’S AMENDMENT

14. An examiner’s amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner’s amendment was given in a telephone interview with Brett Nelson on June 16, 2005.

Amendments to the Claims

15. The claims have been amended as follows:

a) Rewrite Claim 25 as follows:

---25. The method as claimed in claim 14, wherein the bacteria being fermented comprise, at the same time, one or more *Corynebacterium glutamicum* genes which are overexpressed, wherein the one or more genes is/are selected from the group consisting of:

the dapA gene coding for dihydrodipicolinate synthase,
the gap gene coding for glyceraldehyde-3-phosphate dehydrogenase,
the tpi gene coding for triose phosphate isomerase,
the pgk gene coding for 3-phosphoglycerate kinase,
the zwf gene coding for glucose-6-phosphate dehydrogenase,
the pyc gene coding for pyruvate carboxylase,
the mqo gene coding for malate quinone oxidoreductase,
the lysC gene coding for feed-back resistant aspartate kinase,
the lysE gene coding for lysine export protein,
the hom gene coding for homoserine dehydrogenase,
the ilvA gene coding for threonine dehydratase or the ilvA(Fbr) allele coding for feed-back resistant threonine dehydratase,
the ilvBN gene coding for acetohydroxy acid synthase,
the ilvD gene coding for dihydroxy acid hydratase, and
the zwal gene coding for the Zwa1 protein.---

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b) Rewrite Claim 26 as follows:

---26. The method as claimed in claim 14, wherein the bacteria being fermented are *Corynebacterium glutamicum* and comprise, at the same time, one or more endogenous *Corynebacterium glutamicum* genes which are eliminated, wherein the one or more genes is/are selected from the group consisting of:

the pck gene coding for phosphoenol pyruvate,
the pgi gene coding for glucose-6-phosphate isomerase,
the poxB gene coding for pyruvate oxidase, and
the zwa2 gene coding for the Zwa2 protein.---

c) Rewrite Claim 28 as follows:

---28. The method according to claim 14, wherein said vector is pEC-XK99EsigCb2ex contained in *Escherichia coli* strain DH5mcr/pEC-XK99EsigCb2ex deposited under DSM 14375.---

d) Rewrite Claim 37 as follows:

---37. The method as claimed in claim 18, wherein the bacteria being fermented comprise, at the same time, one or more *Corynebacterium glutamicum* genes which are overexpressed, wherein the one or more genes is/are selected from the group consisting of:

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the dapA gene coding for dihydrodipicolinate synthase,
the gap gene coding for glyceraldehyde-3-phosphate dehydrogenase,
the tpi gene coding for triose phosphate isomerase,
the pgk gene coding for 3-phosphoglycerate kinase,
the zwf gene coding for glucose-6-phosphate dehydrogenase,
the pyc gene coding for pyruvate carboxylase,
the mqo gene coding for malate quinone oxidoreductase,
the lysC gene coding for feed-back resistant aspartate kinase,
the lysE gene coding for lysine export protein,
the hom gene coding for homoserine dehydrogenase,
the ilvA gene coding for threonine dehydratase or the ilvA(Fbr) allele coding for feed-back resistant threonine dehydratase,
the ilvBN gene coding for acetohydroxy acid synthase,
the ilvD gene coding for dihydroxy acid hydratase, and
the zwal gene coding for the Zwal protein.---

e) Rewrite Claim 38 as follows:

---38. The method as claimed in claim 18, wherein the bacteria being fermented are *Corynebacterium glutamicum* and comprise, at the same time, one or more endogenous *Corynebacterium glutamicum* genes which are eliminated, wherein the one or more genes is/are selected from the group consisting of:

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the pck gene coding for phosphoenol pyruvate,
the pgi gene coding for glucose-6-phosphate isomerase,
the poxB gene coding for pyruvate oxidase, and
the zwa2 gene coding for the Zwa2 protein.---

f) Add new Claim 39 as follows:

---39. The method according to claim 18, wherein the bacteria is *Corynebacterium glutamicum*.---

Conclusion

16. Claims are 14, 16-18, 25-29, 33, and 35-39 as amended by Applicant or above by the Examiner's amendment, are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen M. Kerr whose telephone number is (571) 272-0931.

The examiner can normally be reached on Monday through Friday, from 9:00am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathupura Achutamurthy can be reached on (571) 272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kathleen M Kerr
Primary Examiner
Art Unit 1652

June 19, 2005